

**PHENIX Technical Support 2006**

# **PHENIX WEEKLY PLANNING**

4/27/06

Don Lynch



## Arc Flash Protection

Voltage *AND* Current rating of the device determines PPE requirements

208 volt service (East Carriage disconnect)  
( $< 225$  Amps)  
Category 2:

- Natural fiber T-shirt
- FR rated long sleeve shirt/pants
- Hard Hat w Face Shield
- Hearing Protection
- Leather gloves
- Leather work shoes



## Arc Flash Protection

Category 2 PPE



## Arc Flash Protection



208 Volts 400 Amp  
rated breaker  
(>225 Amps)

### Category 4:

- Natural fiber T-shirt
- FR rated long sleeve shirt/pants
- Flash suit jacket/pants
- Flash suit with flame retardant lining hood
- Hearing protection
- Leather gloves
- Leather work shoes

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# Arc Flash Protection



Category 4 PPE



## Safety Nugget



Do not exceed posted speed  
limit in the IR!

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## This Week

- Prepared HBD prototype run position supports
- Support task backlog



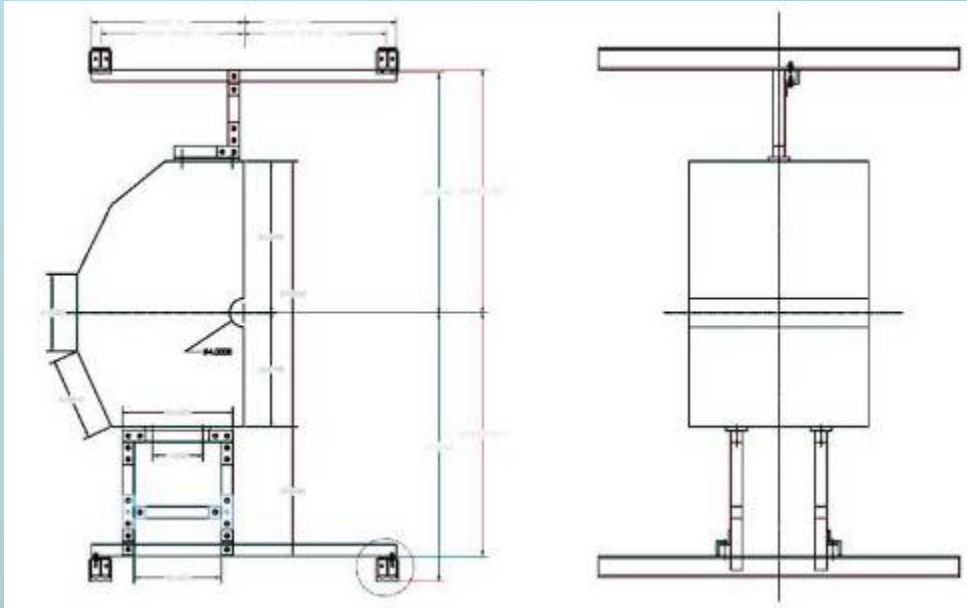
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## HBD Prototype Stand

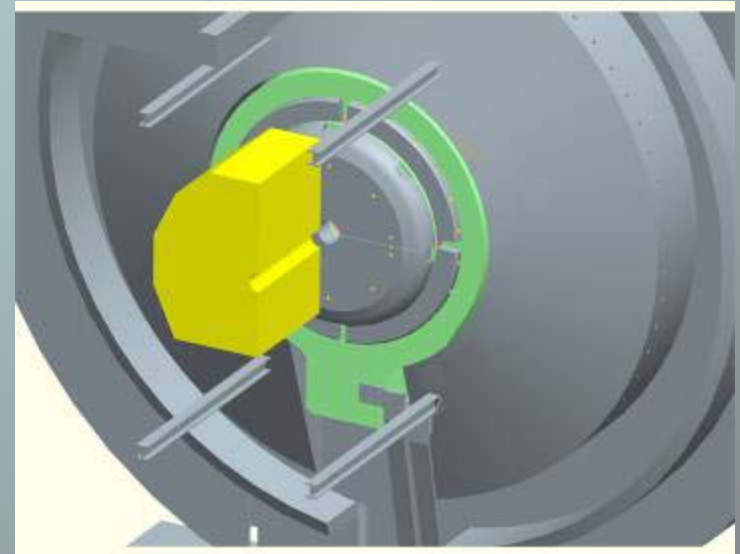




## HBD Prototype Run Position Mounting

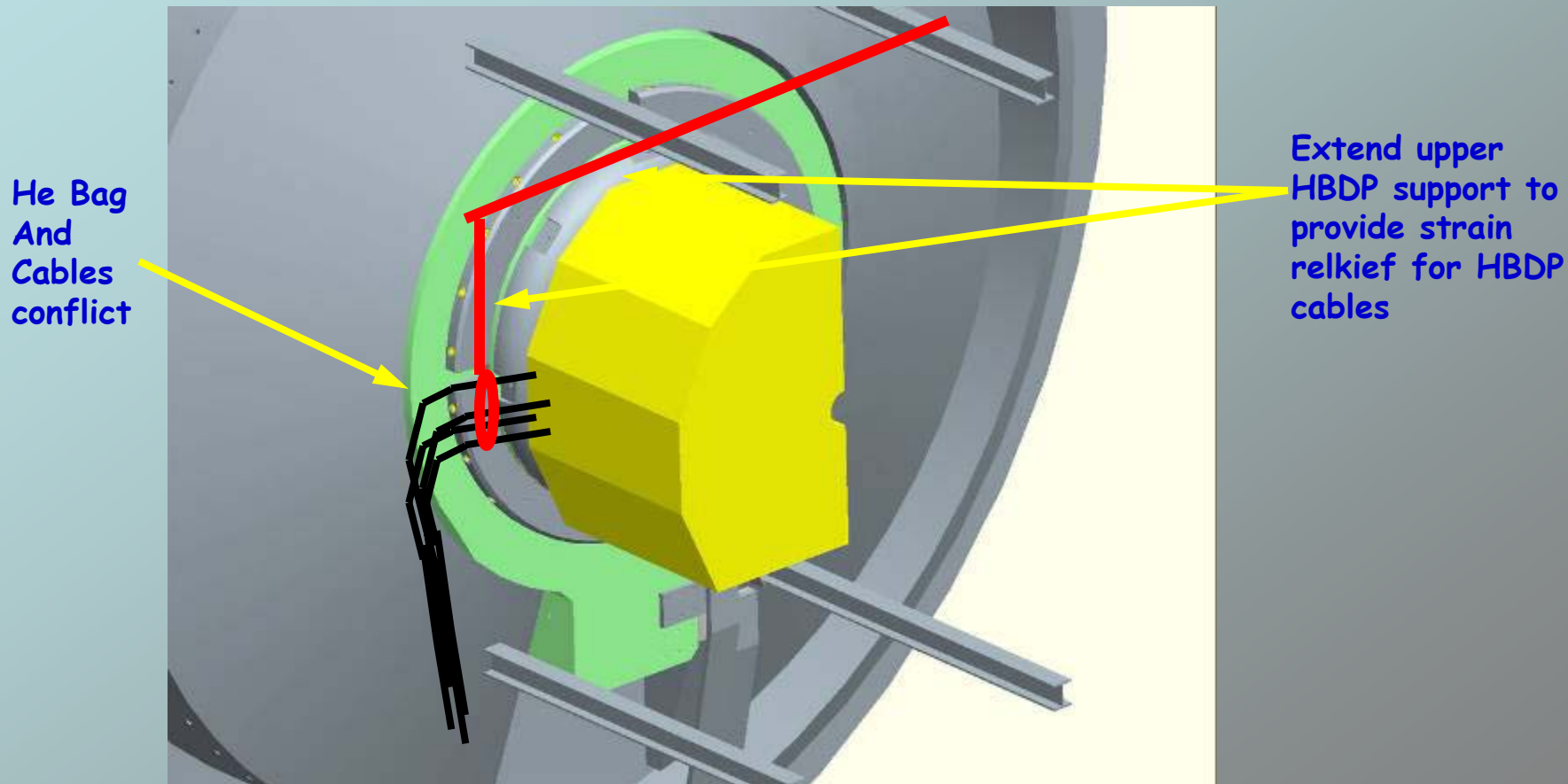


Prototype mounting supports



In run position  
(mounting supports not shown)

# HBD Prototype Run Position Mounting



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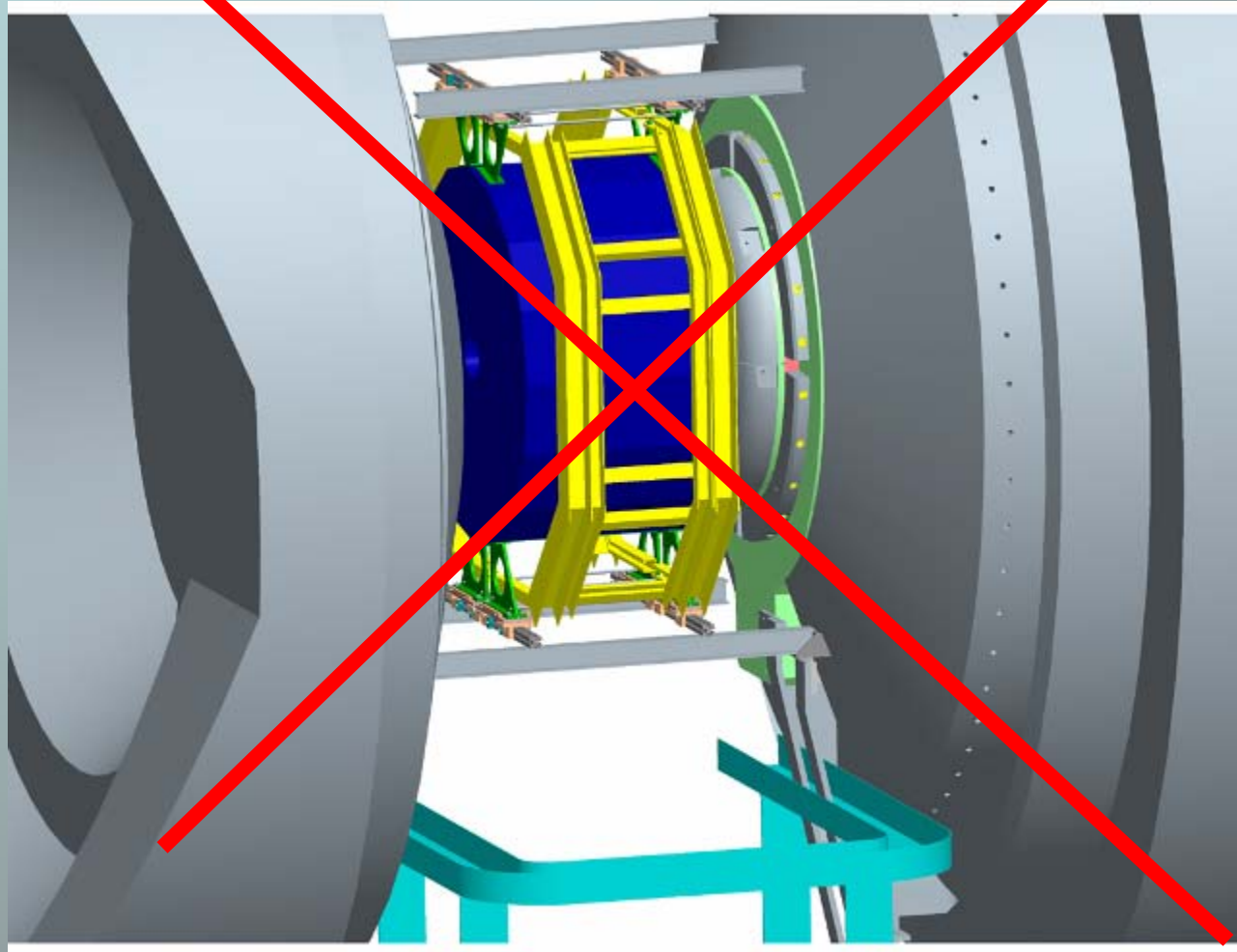
## Next Week

- Continue prep for HBD prototype move to run position
- HBD prototype check out tests
- New detector work (TOF West handling fixtures, HBD support structure, RXNP design, MPC North design)



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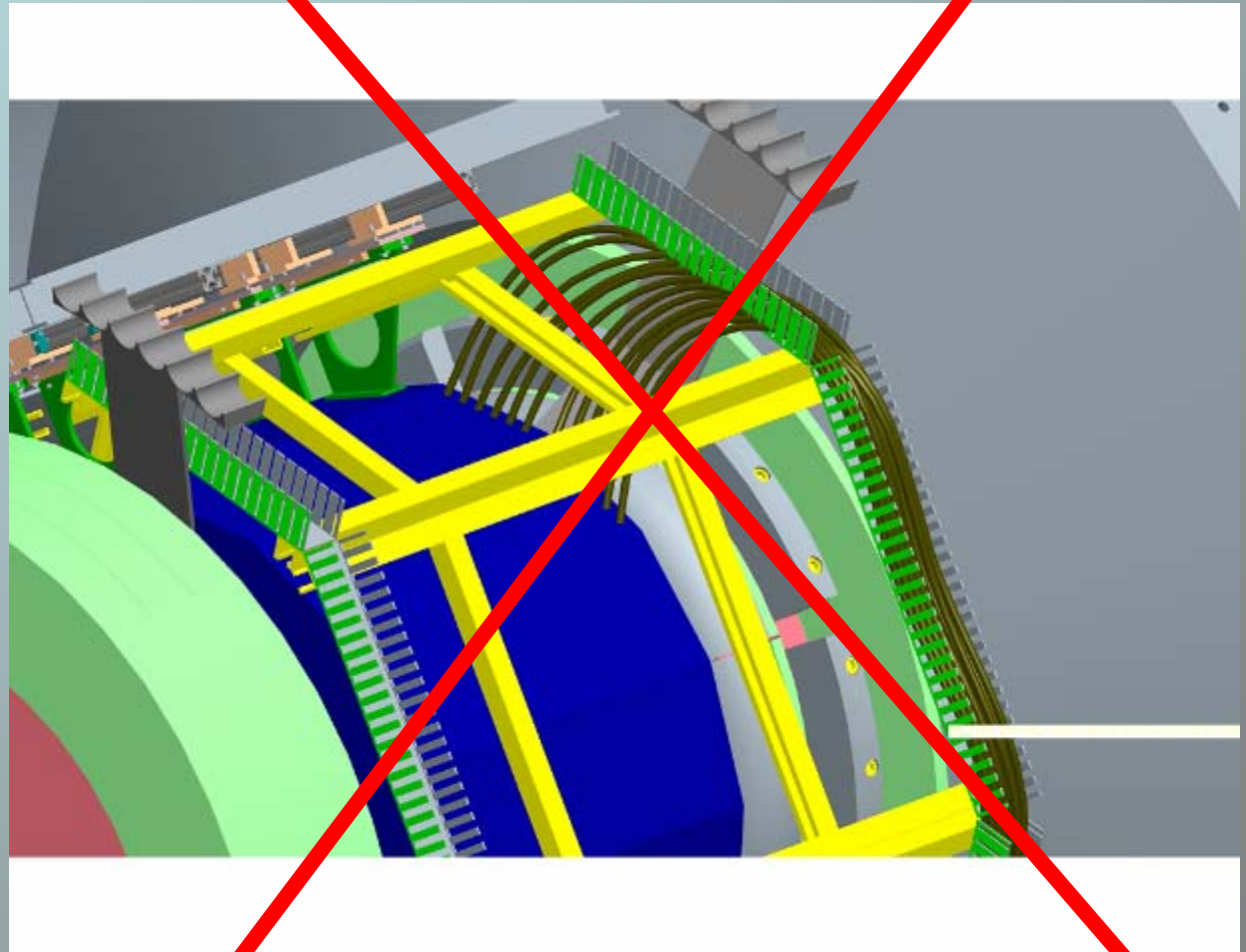
# HBD Cable Management Scheme (1<sup>st</sup> take)



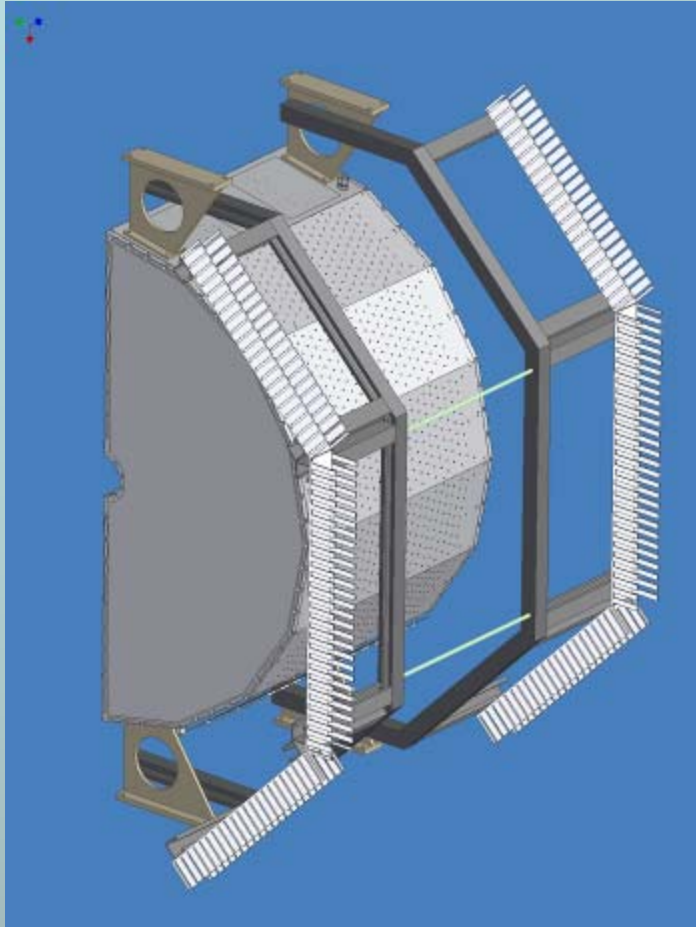


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# HBD Cable Management Scheme (Take 2)

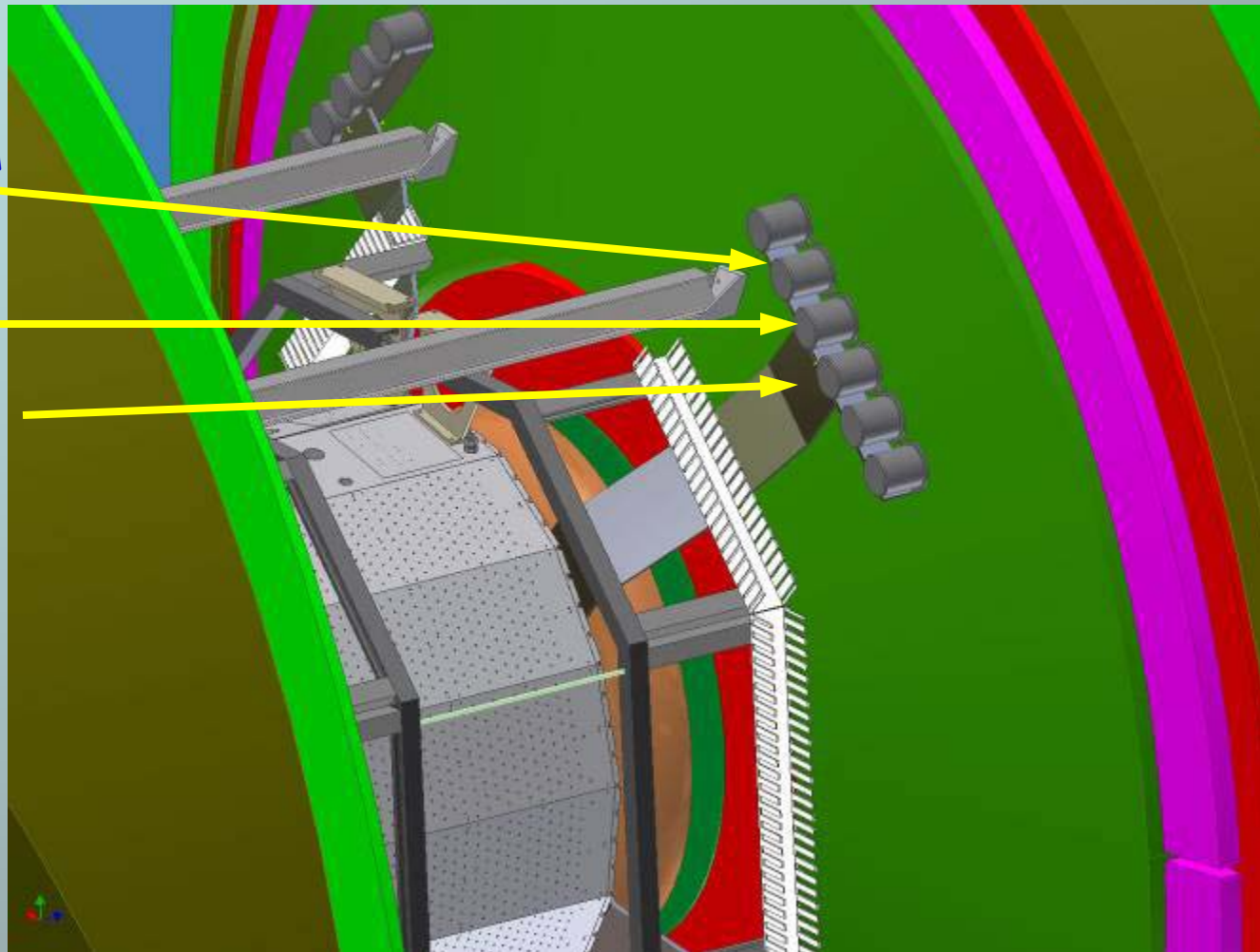


## HBD Cable Management Scheme (Take 3)



Moved some support out of acceptance.

Work-in-progress

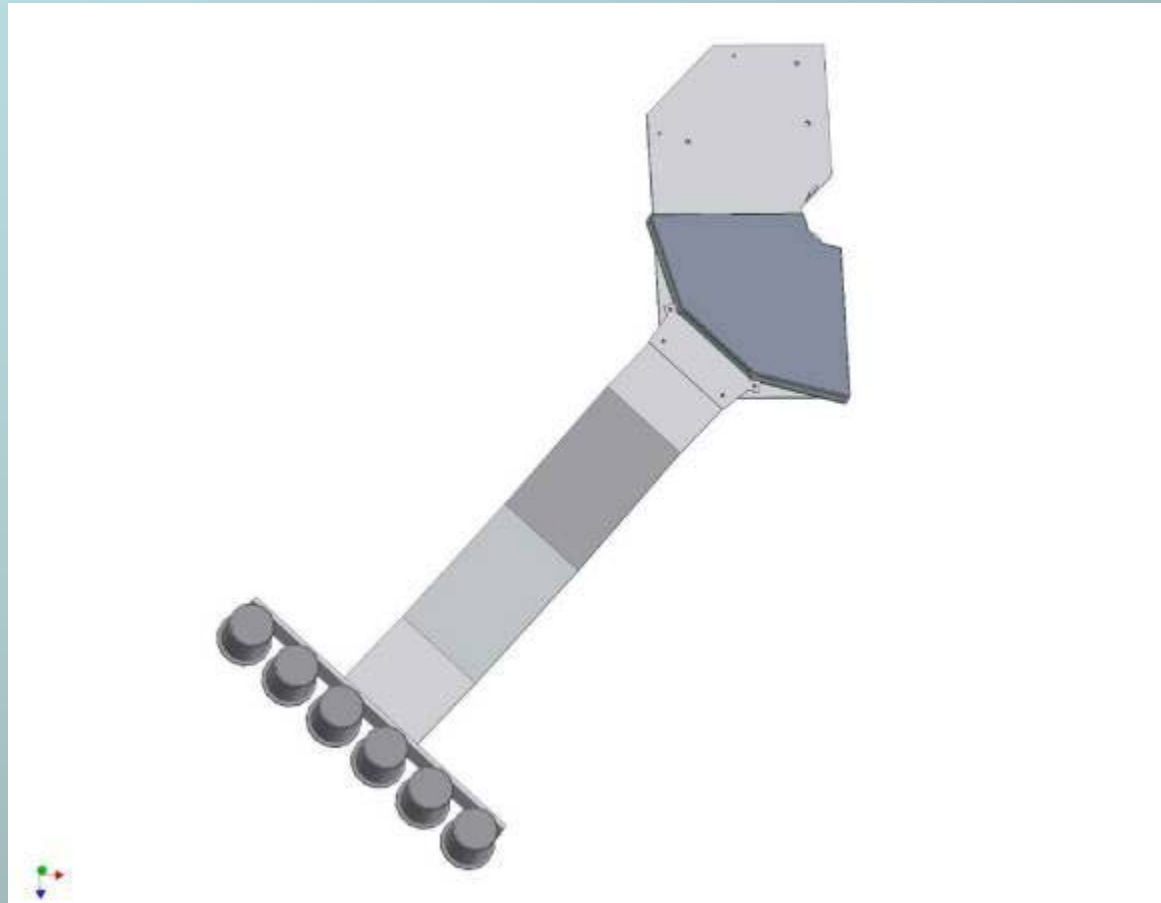


Moved PMT's to 1300 mm max to avoid I-beams

3" PMT's

Attach arms to pole face for extra support

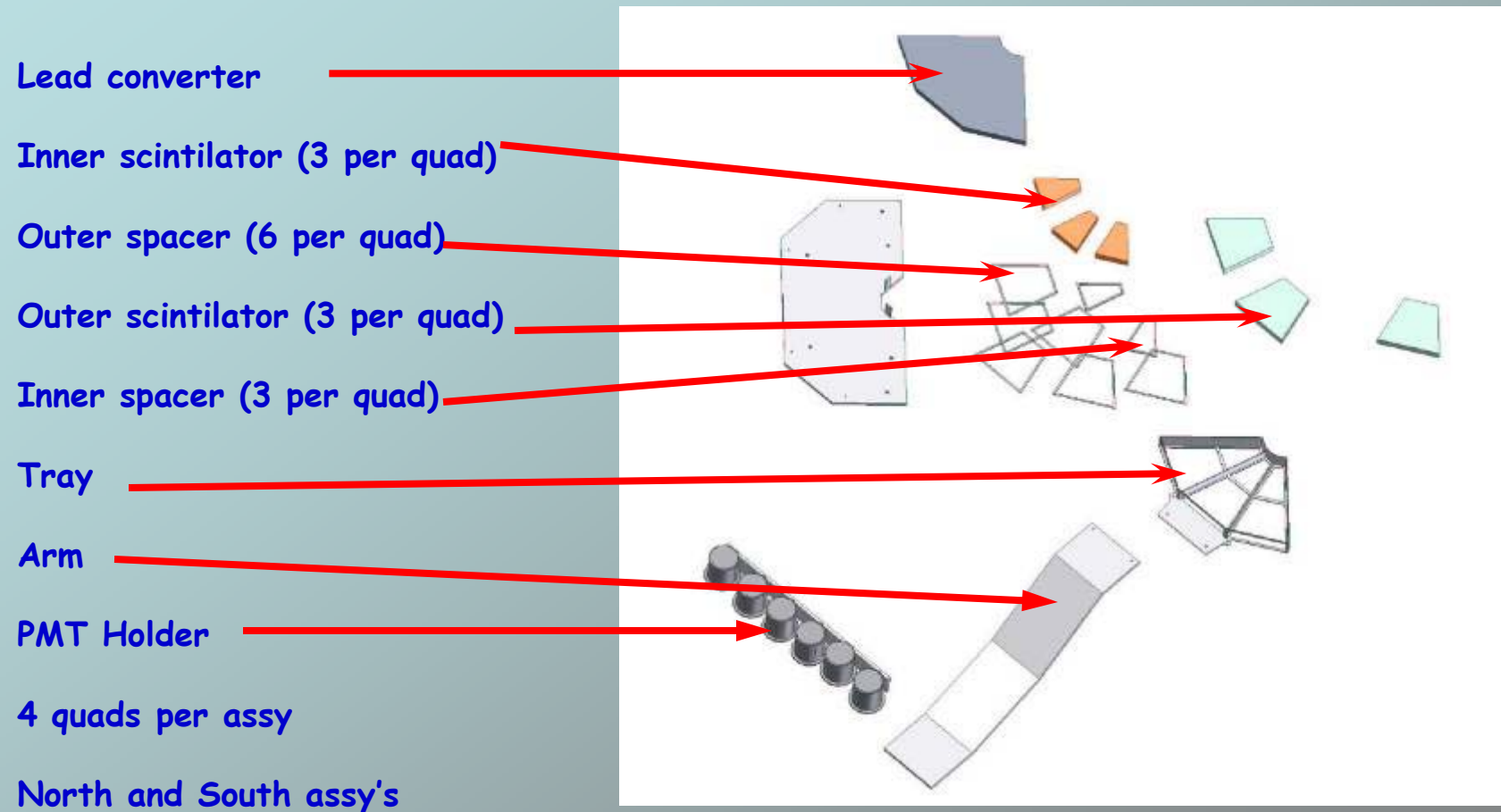
Still working on fiber routing/mounting/protection



Design is progressing in coordination with HBD mounting and cable management



## Reaction Plane Detector (RXNP)



## Next Access Day

- Expect next access day (8 hrs) to be May 10
- May be shorter controlled accesses before then
- Subsystems must arrange for tech assistance prior to access day or don't expect assistance. (see Don Lynch or John Haggerty)
- PHENIX Techs only on CM lift platform unless accompanied by PHENIX Tech (Lift platform is locked and will remain locked even after BLM stand is removed)
- Planned:
  - Move HBD to Run Position?
  - BBC trouble shooting
  - HBD system tests
  - Misc. trouble shooting

## Other Projects

### TOF West

- Expect detectors to be at BNL by June 1.

### MPC North

- Drawings located provided to Mickey.

### Muon RPC

- Nothing New

### Beampipe design

- Conceptual design needs tweaking. New spec control drawing needed.

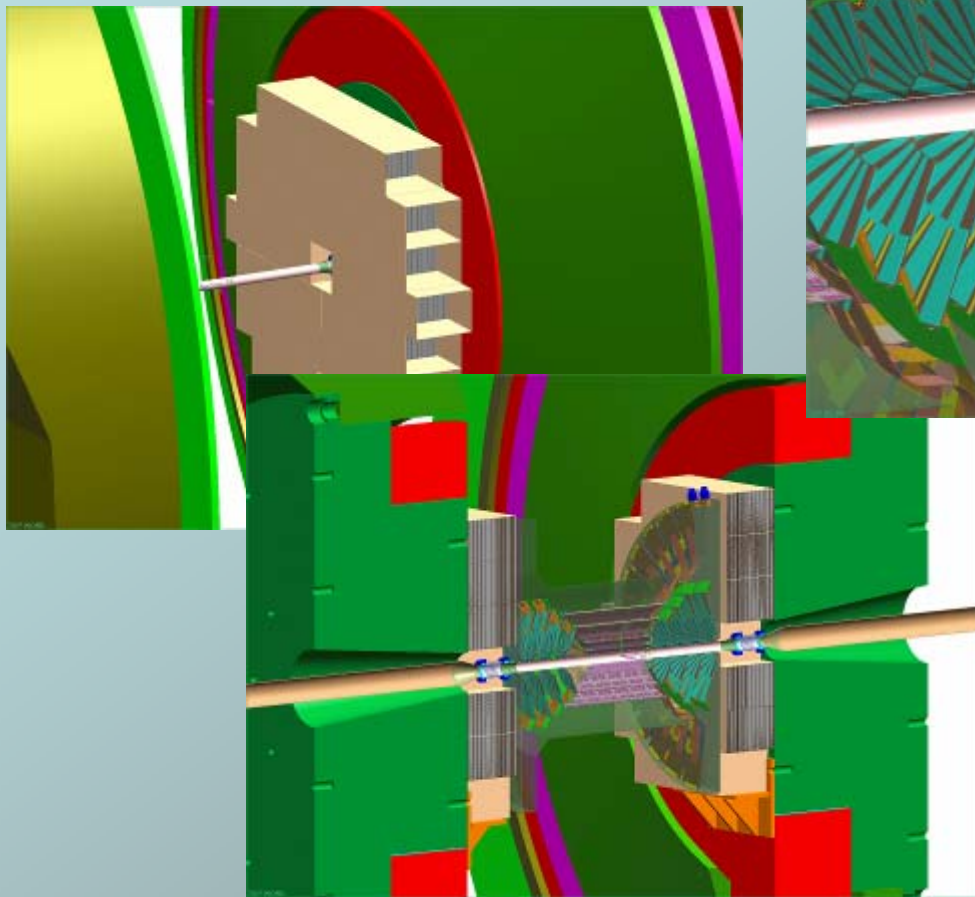
### New CM Crane

- Nothing new

### Engineering Documentation

- Documentation/Drawings data base with web based retrieval
- 3D model at detector outline level with utility envelopes
- utility schematics

## New Beampipe for Upgrades

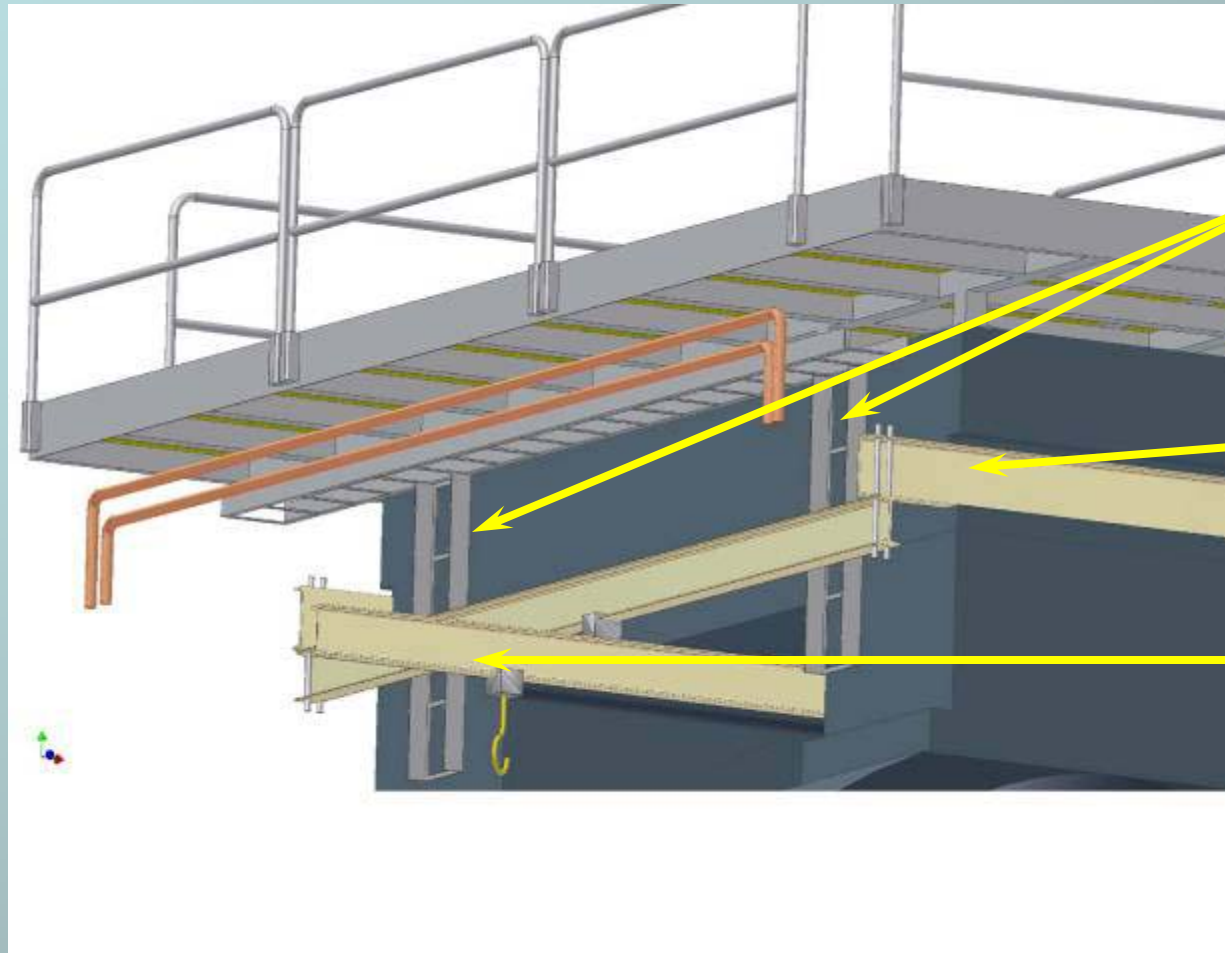


### CA Coordination meeting findings:

1. Min radial clearance for VTX = 25 mm
2. Min Be ID = 40 mm
3. Be wall = 0.5 mm (4.4 mm min clearance)
4. Be ID to be neg coated at BNL
5. Be OD to be epoxy coated by Vendor
6. Requires supports at both bellows
7. Stress analyses needed (axial stress, vacuum breach shock stress and thermo-mechanical stresses during bakeout)
8. RF analysis of bellows needed (shields?)



# **CM Region Crane & Cable Routing Concept**



Cable Trays to route cables NCC Detector from Bridge

Crane Supports use existing flux return notches

CM Crane north-south & east-west motions; extended travel east to existing crane coverage

### Current Tasks

- General run support
- New storage trailer (as promised)
- Fix roof leaks

### Tasks for Shutdown 2006

- Install access platforms from EC top north and MMS
- Replace emergency fan louvres
- Rewire/add IR ceiling lights on emergency power
- Replace WC sliding platform hoisting cables
- Mixing house exhaust fan maintenance

## MOLD Problems



- June '06: end run 5, prep for start of shutdown, prep EC for move to AH
- July '06: TOF West installation, RXNP installation
- Aug. '06: MPC North installation, HBD installation
- Sep. '06: Detector subsystems maintenance, roll EC in, prep for run 6
- Oct. '06: Plan to start cooldown on Oct. 15<sup>th</sup>

*Subsystems: Get requests for maintenance in early to get on the schedule*

Links for weekly planning meeting slides, long term planning, pictures, videos and other technical info can be found from the web site:

[http://www.phenix.bnl.gov/WWW/INTEGRATION/ME&Integration/DRL\\_SSint-page.htm](http://www.phenix.bnl.gov/WWW/INTEGRATION/ME&Integration/DRL_SSint-page.htm)